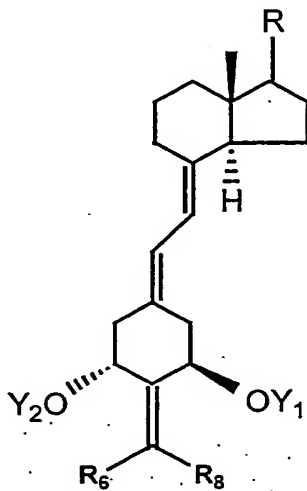


26,27-HOMOLOGATED-20-EPI-
2-ALKYLIDENE-19-NOR-VITAMIN D COMPOUNDS

ABSTRACT OF THE DISCLOSURE

This invention provides a novel class of vitamin D related compounds, namely, the
5 2-alkylidene-19-nor-vitamin D derivatives, as well as a general method for their chemical
synthesis. The compounds have the formula:



where Y_1 and Y_2 , which may be the same or different, are each selected from the group
consisting of hydrogen and a hydroxy-protecting group, R_6 and R_8 , which may be the same or
10 different, are each selected from hydrogen, alkyl, hydroxyalkyl and fluoroalkyl, or when taken
together represent the group $-(CH_2)_x-$ where x is an integer from 2 to 5, and where the group
 R represents any of the typical side chains known for vitamin D type compounds. These 2-
substituted compounds are characterized by relatively high intestinal calcium transport
activity and relatively high bone calcium mobilization activity resulting in novel therapeutic
15 agents for the treatment of diseases where bone formation is desired, particularly low bone
turnover osteoporosis. These compounds also exhibit pronounced activity in arresting the
proliferation of undifferentiated cells and inducing their differentiation to the monocyte thus
evidencing use as anti-cancer agents and for the treatment of diseases such as psoriasis.